**STATE FOREST LAND**
**ENVIRONMENTAL CHECKLIST**

**Purpose of Checklist:**

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decided whether an EIS is required.

Instructions for Applicants:

**This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. Highlighted questions are supplemental to the standard SEPA checklist. These questions look at the proposed project in relationship to the surrounding landscape. Adjacency and landscape/watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at http://www.dnr.wa.gov under "SEPA Center." These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.**

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the attached forest practice application acres, or the actual timber sale acres.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered " does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

**A. BACKGROUND**

1. Name of proposed project, if applicable:

   **Timber Sale Name:** Rocking Robin **Agreement #:** 30-074757

2. Name of applicant: **Department of Natural Resources**

3. Address and phone number of applicant and contact person:**DNR Northwest Region**
   **919 North Township Street**
   **Sedro-Woolley, WA 98284**
   **Contact Person: Candace Johnson (360-856-3500)**

4. Date checklist prepared: **4/22/03**

5. Agency requesting checklist: **Department of Natural Resources**

6. Proposed timing or schedule (including phasing, if applicable):

   **a. Auction Date: 5/24/2004**
   b. Planned contract end date (but may be extended): **9/30/2006**
   c. Phasing: **Not Applicable**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   Timber Sale

   **a. Site preparation:** The need for site prep, including herbicide application, will be assessed following harvest.

   **b. Regeneration Method:** Hand plant with conifer seedlings within two years of harvest.

   **c. Vegetation Management:** Treatment will be assessed in 3-5 years.

   **d. Thinning:** Treatment will be assessed in 10-15 years.

   **Roads: The WV-3102, WV-3102-02, WV-3103-08 roads will be abandoned if built. The existing WV-3103-11, WV-3103-07, WV-3103-05, roads will be abandoned. The other existing roads in the area will be utilized for future forest activities**

   Road Maintenance. **As needed on existing roads**.

**Rock Pits and/or Sale:** **Walker Valley rock pit, Located in Section 4, Township 33 North, Range 5 East, will be utilized in the future for timber sale activities.**
**Other:**

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

☐**303 (d) – listed water body in WAU:** ☐**temp** ☐**sediment** ☐**completed TMDL (total maximum daily load):**
☐**Landscape plan:**
☐**Watershed analysis:**
☐**Interdisciplinary team (ID Team) report:**
☒**Road design plan:** Contact Northwest Region Office for the Rocking Robin Road Plan.
☒**Wildlife report :** Biologist memo on July 11, 2003.
☐**Geotechnical report:**
☐**Other specialist report(s):**
☐**Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):**
☒**Rock pit plan:** Contact Northwest Region Office
☐**Other:** Forest Resource Plan Environmental Impact Statement, July 1992; Final Habitat Conservation Plan, September 1997; State Soil Survey, 1992,See

**9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.**

None Known**.**

10. List any government approvals or permits that will be needed for your proposal, if known.

☒**HPA** ☐**Burning permit** ☐**Shoreline permit** ☐**Incidental take permit** ☒**FPA #** _____ ☐**Other:**

11. Give brief, complete description of our proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description.)

**a. Complete proposal description:**

**Approximately140 acres were evaluated for this proposal. Approximately 40 of these acres will be set aside for a future harvest. Road expense and potential yarding difficulties were the biggest factors when determining the current proposal. Within the current proposal, 4.3 acres will be set aside for wildlife habitat. All three units will be harvested by even-aged methods.**

Sale of Timber
Estimated Volume**: 5,111 MBF**.
Harvest Area**:**

| Acres | Unit 1 | Unit 2 | Unit 3 | Total |
|---|---|---|---|---|
| Gross Acres | 26.8 | 15.6 | 51.7 | 94.1 |
| Net Acres | 25.6 | 14.8 | 49.4 | 89.8 |

**Type of Harvest: Regeneration.**
**Logging System: Combination of cable and ground based (shovel) yarding methods.**
**Landings: 12 landings are currently proposed for this project.**
**Roads: This proposal includes approximately 5,582 feet of new road construction, and 7,883 feet of reconstruction. 1,640 feet of new construction will be abandoned if built, 2,106 feet of existing road will be abandoned.**

**b.Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.**

**Pre-harvest stand descriptions:**

**All three units consist of naturally regenerated stands that are approximately 70-75 years old. The proposed site was previously harvested in the early 1930's, during the era of railroad logging.**

**Units #1 and #3 over-stories are dominated by Douglas-fir(approximately 90%), with components of western hemlock and western redcedar, and red alder. Although Unit #2 is also dominated by Douglas-fir, it has significantly higher volumes of red alder.**

**Overall Unit Objectives:**

**Objectives for proposal include generating revenue for State Forest Board – Transfer (01); protecting water quality; maintaining site productivity and protecting/enhancing wildlife habitat through a tree retention strategy. This proposal meets or exceeds all of the guidelines and prescriptions set forth in the DNR Habitat Conservation Plan, Forest Resource Plan, and Forest Practices Rules and Regulations.**

**c. Road activity summary. See also attached forest practice application (FPA) for maps and more details.**

| Type of Activity | How Many | Length (feet) (Estimated) | Acres (Estimated) | Fish Barrier Removals (#) |
|---|---|---|---|---|
| **Construction** | | **5,582** | **2.05** | |
| **Reconstruction** | | **7,883** | | |
| **Maintenance** | | | | |
| **Abandonment** | | **3,746** | | |
| **Bridge Install/Replace** | | | | |
| **Culvert Install/Replace (fish)** | | | | |

| | | | | |
|---|---|---|---|---|
| **Culvert Install/Replace (no fish)** | **15** | | | |

**12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. (See attached timber sale map. See also color landscape/WAU map on the DNR website http://www.dnr.wa.gov under "SEPA Center.")**

**a. Legal description:**

**The proposal is located in Township 33 North, Range 5 East, Sections 14,15,22,23.**
**The rock pit is located in Section 4 of Township 33 North, Range 5 East.**

**b. Distance and direction from nearest town (include road names):**

**From Arlington travel 5.5 miles north on HWY 9. Turn right onto the Granstrom/Finn Settlement Road and travel for 5.5 miles. Turn right onto the Lake Cavanaugh Road, and travel for .5 miles. Turn left onto the Peter Burns Road and travel for 1.2 miles. To access Unit #3 remain on the Peter Burns Road, travel for .2 miles past the junction with road SW-FS-1000. To access Unit #2 take the second right at .3 miles. To access Unit #1 (after roads associated with this proposal are completed) turn right at next junction and travel for 1.4 miles. To access Unit #1 (before roads are completed) continue to travel 1.6 miles on the Lake Cavanaugh Road after the Peter Burns Road intersection and turn left at junction, travel .5 miles.**

**c. Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website http://www.dnr.wa.gov under " SEPA Center.")**

| Name | Total Acres | Area of Proposal (Gross Acres) |
|---|---|---|
| **Cavanaugh WAU** | **31,190** | **42.4** |
| **Sub-Basin 1** | **2,591** | **37** |
| **Sub-Basin 10** | **2,715** | **5.4** |
| **NOOKACHAMPS WAU** | **47,428** | **51.7** |
| **Sub-Basin 10** | **3,123** | **51.7** |

13. Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website http://www.dnr.wa.gov under "SEPA Center" for a broader landscape perspective.)

**The following table illustrates the different ownerships within the various WAUs and sub-basins in which this proposal is found.**

| Name | Acres | DNR managed acres | % DNR managed land | Proposal Acres | Non-DNR land | % Non-DNR land |
|---|---|---|---|---|---|---|
| **Cavanaugh WAU** | **31,190** | **16,685** | **53** | **41.7** | **14,505** | **47** |
| **Sub-basin 1** | **2,591** | **2,144** | **83** | **36.3** | **447** | **17** |
| **Sub-basin 10** | **2,715** | **2,541** | **94** | **5.4** | **174** | **6** |
| **Nookachamps WAU** | **47,428** | **13,989** | **29** | **52.4** | **33,439** | **71** |
| **Sub-basin 10** | **3,123** | **1,437** | **46** | **55.4** | **1,686** | **54** |

This information is based on the best available information as of May 1, 2003.

**The next table reports timber harvest activity in the same WAUs and sub-basins within the past seven years on both DNR managed lands and non-DNR lands. The data was compiled from the Department's GIS database.**

| WAU/sub-basin | Total DNR harvest acres: | DNR harvest acres: Even-aged | Non-DNR harvest acres: Even-aged | Average DNR even-aged harvest acres: previous seven years |
|---|---|---|---|---|
| **Cavanaugh** | **2,044** | **1,919** | **5,118** | **274** |
| **Sub-basin 1** | **466** | **255** | **333** | **36.4** |
| **Sub-basin 10** | **506** | **502** | **0** | **71.7** |
| **Nookachamps** | **3,756** | **1,327** | **1,224** | **189.6** |
| **Sub-basin 10** | **383** | **105** | **99** | **15** |

**This information is based on the best available information as of May 1, 2003.**

**This proposal is part of the Walker Valley Harvest Plan. This plan was developed by the DNR in 1990. One of its main goals was to project steady harvest levels for 30 years. Future activities in all sub-basins include road building, rock pit expansion, silvicultural work, and timber harvesting. Activities occurring on DNR managed land will follow Forest Practices Rules, Habitat Conservation Plan (HCP) guidelines, and the Forest Resource Plan, policies designed to minimize environmental impacts.**

**B. ENVIRONMENTAL ELEMENTS**

**1. Earth**

a. General description of the site (check one):

☐Flat, ☒Rolling, ☐Hilly, ☐Steep Slopes, ☐Mountainous, ☐Other:

1) General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).

**Nookachamps WAU:**

**The Nookachamps WAU consists of 47,428 acres of rolling foothills, occasional rock outcrops, mountainous terrain, and valley bottoms. The boundaries of the WAU follow the ridge line created by Cultus Mountain west to Devil's Mountain. A low valley between the two mountains drains a series of lakes north into the Skagit River via Nookachamps Creek. Cultus mountain is the highest point of the WAU at 4,027 feet while the Nookachamps Creek valley is near sea level. Slopes within the WAU are highly variable. Annual rainfall averages between 40-60 inches, increasing as one heads east into the foothills of the Cascade mountains.**

**Forest Vegetation Zones range from the western Douglas-fir zone at lower elevations, through the western hemlock zone at mid-level elevations, up to the Pacific silver fir zone in the higher elevations. In low to mid-elevations, hardwood stands are a component of the vegetation zones, including red alder, bigleaf maple, and/or cottonwoods. This proposal is located in the west cascade hemlock zone.**

**Cavanaugh WAU**

**The Cavanaugh WAU consists of 31,190 acres and varies in landform from flat to mountainous with an elevation range of 393 to 3,966 feet and a mean elevation of 1,631 feet. Several mountains in the WAU include Mt. Washington, Table Mountain, Frailey Mountain, and Bald Mountain. Streams within the WAU flow into Pilchuck Creek or Lake Cavanaugh. Rainfall within the WAU averages 45 to 80 inches annually, with an average of 59 inches. In general, this WAU is in the western hemlock zone. Timber types range from hardwood to conifer. The low to mid-high elevations are populated with red alder, bigleaf maple, and/or cottonwood hardwood stands, and Douglas-fir, western hemlock, and/or western redcedar conifer stands. The higher elevations in the WAU contain conifer stands generally comprised of Pacific silver fir, western hemlock, and/or western redcedar**.

2) Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).

**None**.

b. What is the steepest slope on the site (approximate percent slope)?

**80% slopes can be found on approximately 1 acre of the proposal in Unit 3.**

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.

| State Soil Survey # | Soil Texture | % Slope | Acres | Mass Wasting Potential | Erosion Potential |
|---|---|---|---|---|---|
| **UNIT 1** | | | | | |
| **1085-Chuckanut** | **Gravelly Loam** | **30-65** | **11** | **Medium** | **Medium** |
| **8107-Tokul** | **Gravelly Loam** | **15-30** | **13** | **Low** | **Low** |
| **0143- Andic Xerochrepts** | **Gravelly Loam** | **60-90** | **2.8** | **High** | **High** |
| **UNIT 2** | | | | | |
| **1085-Chuckanut** | **Gravelly Loam** | **30-65** | **9** | **Medium** | **Medium** |
| **8107-Tokul** | **Gravelly Loam** | **15-30** | **6.6** | **Low** | **Low** |
| **UNIT 3** | | | | | |
| **1085-Chuckanut** | **Gravelly Loam** | **30-65** | **41.7** | **Medium** | **Medium** |
| **1084-Chuckanut** | **Gravelly Loam** | **3-30** | **10** | **Low** | **Low** |

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

1) Surface indications:

None.

**2) Is there evidence of natural slope failures in the sub-basin(s)?**
**☒No ☐Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:**

**The available aerial photo record and on-site observations indicate that slope failures have not occurred. (see table in B.1.c.)**

**3) Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?**
**☒No ☐Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:**
**Associated management activity:**

**4) Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?**
**☒No ☐Yes, describe similarities between the conditions and activities on these sites:**

5) Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.

**Only one steep slope is associated with a perennial water source within this proposal. This slope is located in Unit 2. The 100 foot no harvest buffer applied to this stream will provide adequate protection against potential erosion. Roads to be constructed under this proposal have been located outside of sensitive slope areas.**

**e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill. Approx. acreage new roads: 2.12Approx. acreage new landings: 3.5 Approx. acreage rock pit fills: .5 acres Fill source: Native Material.**

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

**Some localized erosion could occur during road construction and log transportation activities. However, prudent road construction techniques and normal maintenance practices will minimize the amount of erosion.**

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? Approximate percent of proposal in permanent road running surface (includes gravel roads**): Less than 1%**

h. Propose measures to reduce or control erosion, or other impacts to the earth, if any:
(Include protection measures for minimizing compaction or rutting.)

**All roads will be constructed to meet or exceed Forest Practice standards. Appropriate drainage devices including culverts, drain dips, water bars, ditching, etc. will be used as necessary to reduce surface erosion. Also, energy dissipaters will be installed with culverts to reduce stream bed erosion. Relief pipes will be strategically placed to reduce road ditch sediment from entering live streams. In areas where soil disturbance has occurred, the appropriate erosion control measures will be used to prevent sediment from being transported, such as the placement of straw mulch or grass seed. Road construction and ground based harvest will be limited to the dry season.**

**The type 4 stream and the forested wetland found in Unit #2 will be protected with no harvest buffers. Felling and yarding of trees will generally be directed away from all stream channels. There is an equipment limitation zone that will be maintained along type 5 streams to exclude equipment from disturbing the ground within 30 feet of the channels. Ground base yarding will be generally limited to a distance of 200 feet from constructed gravel road, on slopes less than 25%. Logs will have lead end suspension when cable yarding. These measures will minimize soil disturbance from falling/yarding operations.**

**2. Air**

a. What types of emissions to the air would result from the proposal (i.e., dust from truck traffic, rock mining, crushing or hauling, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

**During harvesting activities, no emissions are anticipated other than minor amounts of equipment exhaust and road dust created by log hauling activities. Following harvest, logging slash may be burned.**

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

**Not applicable.**

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

**If slash burning occurs, it will adhere to the Washington State Smoke Management Act.**

**3. Water**

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. (See attached timber sale map and forest practice base maps.)

| UNIT | Type 4 Stream | Type 5 Stream | Wetlands |
|---|---|---|---|
| 1 | 1 | 1 | 0 |
| 2 | 1 | 2 | 1 |
| 3 | 0 | 0 | 0 |

a) Downstream water bodies:

**Lake Creek and Pilchuck Creek**

b) Complete the following riparian & wetland management zone table:

| Wetland, Stream, Lake, Pond, or Saltwater Name (if any) | Water Type | Number (how many?) | Avg RMZ/WMZ Width in Feet (per side for streams) |
|---|---|---|---|
| Wetland < 1 acre | | 1 | 100 |
| Unnamed | 4 | 2 | 100 |
| Unnamed | 5 | 3 | 0 |

c) List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.

**A 100 foot no harvest buffer was placed on the type 4 streams found in Unit #1 and Unit #2 Ground-based harvest equipment will be excluded within 30 feet of bankfull width of all Type 5 stream channels. Unit #2 has one 0.60 acre forested wetland. It will be given a 100-foot WMZ, in which no trees will be harvested. Retained some dominate Douglas-fir trees along all type 5 streams. Stream integrity will be maintained by requiring full suspension or temporary crossing structures (cribbing) when yarding over stream channels.**

2) Will the project require any work over, in, or adjacent to (within 200 feet) to the described waters? If yes, please describe and attach available plans.
☐No ☒Yes (See RMZ/WMZ table above and attached timber sale map.)
Description (include culverts):

**See B-3-a-1-c (previous question) for equipment and harvesting restrictions. Cable yarding will be allowed over Type 5 streams, provided they achieve full suspension of logs. Where full suspension is not possible, log cribbing will be laid down parallel to incised stream banks to minimize soil disturbance. Energy dissipaters will be installed with culverts to reduce erosion. Relief pipes will be strategically placed to reduce road ditch sediment from entering live streams. A 60-inch diameter culvert will be installed at 5+97 of the WV-3103 Road on a type 5 stream crossing, which will allow the water to flow unrestricted.**

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

**No material will be placed in, or dredged from, surface water or wetlands during the course of this proposal.**

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. (Include diversions for fish-passage culvert installation.)
☒No ☐Yes, description:

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
☒No ☐Yes, describe location:

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
☒No ☐Yes, type and volume:

7) Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?
**Yes, the following table illustrates the potential for mass wasting for the soils found in sub-basins associated with this proposal.**

| WAU/sub-basin | Low/insignificant soil mass wasting potential | Medium mass wasting potential | High mass wasting potential |
|---|---|---|---|
| **Cavanaugh/sub-basin 1** | 65% | 22% | 13% |
| **Cavanaugh/sub-basin 10** | 72% | 19% | 8% |
| Nookachamps/sub-basin10 | 61% | 33% | 5% |

**Yes, the following table illustrates the potential for surface erosion for the soils found in sub-basins associated with this proposal.**

| **WAU/sub-basin** | Low/insignificant surface erosion potential | Medium surface erosion potential | High surface erosion potential |
|---|---|---|---|
| **Cavanaugh/sub-basin 1** | 63% | 23% | 13% |
| **Cavanaugh/sub-basin 10** | 62% | 30% | 8% |
| Nookachamps/sub-basin10 | 54% | 34% | 7% |

**Activities associated with this proposed action will not lead to high levels of eroded material to enter surface water for a number of reasons:**
**(1) The majority (95+%) of this timber sale will be cable logged.**
**(2) Adequate no-cut buffers and equipment exclusion buffers were placed on all streams.**
**(3) New road construction was minimized and located in stable areas.**

8) Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?
☒No ☐Yes, describe changes and possible causes:

9) Could this proposal affect water quality based on the answers to the questions 1-8 above?
☒No ☐Yes, explain:

10) What are the approximate road miles per square mile in the WAU and sub-basin(s)?
Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?
☒No ☐Yes, describe:

| **WAU and sub-basin(s)** | **Road miles per square mile** |
|---|---|
| **Cavanaugh WAU** | **4.1 miles per section** |
| **Sub-basin 1, Cavanaugh WAU** | **4.9 miles per section** |
| **Sub-basin 10, Cavanaugh WAU** | **6.6 miles per section** |
| **Nookachamps WAU** | **4.6 miles per section** |
| **Sub-basin 10, Nookachamps WAU** | **5.9 miles per section** |

11) Is the proposal within a significant rain-on-snow (ROS) zone? If not, **STOP HERE** and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.
☒No ☐Yes, approximate percent of WAU in significant ROS zone.
Approximate percent of sub-basin(s):

12) If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?

13) Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?
☒No ☐Yes, describe observations:

**None Known**.

14) Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact.

**This proposal is located in rain-dominated portions of the Cavanaugh and Nookachamps WAUs. The percentage of land in the Cavanaugh and the Nookachamps that are hydrologically mature (>25 years old) are 86% and 66% respectively. Therefore, proposed timber removal activities should have minimal impact on peak flows.**

15) Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?
☒No ☐Yes, possible impacts:

16) Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts.

b. Ground Water:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

**No ground water will be withdrawn. Water discharges will include channeled water through ditches and culverts. As this water empties out onto the forest floor, it will increase surface saturation in localized areas, but is not expected to increase ground water levels over a significant portion of the proposal area.**

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

**Insignificant amounts of oil and other lubricants could be discharged inadvertently as a result of heavy equipment use. No lubricants will be disposed of onsite.**

3) Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?
☒No ☐Yes, describe:

a) Note protection measures, if any.

c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

**Runoff from the road surfaces will be collected in ditches and diverted to stable areas on the forest floor through the uses of ditches, culverts, and energy dissipaters.**

2) Could waste materials enter ground or surface waters? If so, generally describe.

**Insignificant amounts of oil and other lubricants could be discharged inadvertently as a result of heavy equipment use.**

a) Note protection measures, if any.

**Use of culverts, ditches, and energy dissipaters. Equipment limitations along non-fish seasonal streams. Directional felling away from streams. No lubricants will be disposed of onsite. Refer to b.1.h for further protection measures to be used.**

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:
(See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-16, B-3-b-3-a, and B-3-c-2-a.)
**Existing and constructed ditches, cross drain culverts, drain dips, and water bars will be used to control runoff. Straw, grass seeding, or other appropriate methods may be used on any soil exposed during the course of this proposal in order to prevent sediment movement. Roads and landings will be crowned to avoid water accumulations. Any ground-based yarding that may occur will be limited to areas with gentle slopes (<25%). Falling and yarding away from all seasonal streams will be applied when feasible. All activities associated with this proposal will meet or exceed Forest Practices standards and the Habitat Conservation Plan.**

**4. Plants**

a. Check or circle types of vegetation found on the site:

☒deciduous tree: ☒alder, ☒maple, ☐aspen, ☐cottonwood, ☐western larch, ☐birch, ☐other:
☒evergreen tree: ☒Douglas fir, ☐grand fir, ☐Pacific silver fir, ☐ponderosa pine, ☐lodgepole pine, ☒western hemlock, ☐mountain hemlock, ☐Englemann spruce, ☐Sitka spruce, ☒red cedar, ☐yellow cedar, ☐other:
☒shrubs: ☒huckleberry, ☒salmonberry, ☐salal, ☐other:
☒grass
☐pasture
☐crop or grain
☐wet soil plants: ☒cattail, ☐buttercup, ☐bullrush, ☒skunk cabbage, ☒devil's club, ☐other:
☐water plants: ☐water lily, ☐eelgrass, ☐milfoil, ☐other:
☐other types of vegetation:
☐plant communities of concern:

b. What kind and amount of vegetation will be removed or altered? (See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.)

**This proposal will remove second growth conifer and hardwood trees on approximately 90 acres, and will be replaced with young, mixed conifer plantations. In accordance with agency procedures, no more than 93% of the standing trees will be removed with this proposal. Some alteration of shrubs and ground vegetation may occur during the course of harvest activity.**

1) Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: http://www.dnr.wa.gov under "SEPA Center.")

**UNIT #1:**
**Northern boundary**: **Timber approximately 70-75 years old**.
**Western boundary: Timber approximately 70-75 years old**.
**Eastern boundary: Planted 1988**
**Southern boundary: Planted 1988**

**UNIT #2:**
**Northern boundary**: **Planted 1990.**
**Western boundary: Planted 1990.**
**Eastern boundary: Planted 1990.**
**Southern boundary: Planted 1990.**

**UNIT #3:**
**Northern boundary**: **Timber approximately 70-75 years old**.
**Western boundary: Timber approximately 70-75 years old**.
**Eastern boundary: Planted 1998.**
**Southern boundary: Planted 1998.**

2) Retention tree plan:.

**An assortment of individual leave trees will be grouped and scattered on the proposal site. Seven percent of the live trees per acre greater than 12 inches in diameter breast height, with a minimum of 8 trees per acre as determined by FRIS (Forest Resource Inventory System), will be retained in the proposal area. Therefore, the project will retain 882 leave trees on site.**

**Based FRIS the number of legacy trees in Unit #1 that would meet the seven percent requirement is 9.4 trees per acre, for a total of 252 trees. Based on FRIS (Forest Resource Inventory System), the number of legacy trees in Unit #2 that would meet the seven percent requirement was less than eight trees per acre. Using the minimum of eight trees per acre, the total number of leave trees that are required to leave is 129 trees. Based on FRIS (Forest Resource Inventory System), the number of legacy trees in Unit #3 that would meet the seven percent requirement is 9.5 trees per acre, for a total of 501 trees.**

**Retention trees are both scattered and clumped to provide a wide variety of upland habitat diversity. Clumped and scattered leave trees are located no more than 400 feet apart. Trees selected for retention are either in the dominant or co-dominant crown classes, containing structural characteristics important to wildlife, and indicating wind firmness.**

c. List threatened or endangered plant species known to be on or near the site.

**None known.**

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:
None.

**5. Animal**

a. Circle or check any birds animals or unique habitats which have been observed on or near the site or are known to be on or near the site:

birds: ☒hawk, ☐heron, ☐eagle, ☒songbirds, ☐pigeon, ☐other:
mammals: ☒deer, ☐bear, ☐elk, ☐beaver, ☐other:
fish: ☐bass, ☐salmon, ☐trout, ☐herring, ☐shellfish, ☐other:
unique habitats: ☐talus slopes, ☐caves, ☐cliffs, ☐oak woodlands, ☐balds, ☐mineral springs

b. List any threatened or endangered species known to be on or near the site (include federal- and state-listed species).
**None.**

c. Is the site part of a migration route? If so, explain.
☒Pacific flyway ☐Other migration route: Explain if any boxes checked:

**All of Washington state is considered part of the Pacific flyway. No impacts are anticipated as a result of this Proposal being completed.**

d. Proposed measures to preserve or enhance wildlife, if any:

1) Note existing or proposed protection measures, if any, for the complete proposal described in question A-11.
Species /Habitat: Protection Measures:
Species /Habitat: Protection Measures:
Species /Habitat: Protection Measures:

**6. Energy and Natural Resources**

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

**Does not apply.**

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

**Does not apply.**

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

**Does not apply.**

**7. Environmental Health**

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

**There is minimal hazard due to heavy equipment operations. There is a slight chance of hydraulic or oil spills from the heavy equipment that will be operating on the site. There is a potential fire hazard if operating in moderate fire weather conditions during summer months.**

1) Describe special emergency services that might be required.

**None**.

2) Proposed measures to reduce or control environmental health hazards, if any:

**Safe operation of all equipment will be encouraged. Industrial restrictions/precaution levels regarding forest fire protection will be enforced. The timber purchaser will be required to have fire suppression equipment on site during the restricted fire season while harvest activity is going on.**

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

**Noise from log trucks and logging equipment will be present while operating during daylight hours.**

2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.

**Noise from road construction and harvest activity will be present in the immediate vicinity of this proposal during the course of operations. Noise from log hauling will be present along the haul routes during the course of operations.**

3) Proposed measures to reduce or control noise impacts, if any:

**None. Noise associated with harvest and road construction activity will not be audible anywhere but in the immediate vicinity of the proposal. Noise from log hauling is an historic activity in the area and should not be present above customary levels.**

**8. Land and Shoreline Use**

a. What is the current use of the site and adjacent properties? (Site includes the complete proposal, e.g. rock pits and access roads.)

**Forest management**.

b. Has the site been used for agriculture? If so, describe.

**No**.

c. Describe any structures on the site.

**None.**

d. Will any structures be demolished? If so, what?

**No.**

e. What is the current zoning classification of the site?

**Commercial forest land.**

f. What is the current comprehensive plan designation of the site?

**Industrial forestry.**

g. If applicable, what is the current shoreline master program designation of the site?

**None.**

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

**No**.

i. Approximately how many people would reside or work in the completed project?

**None**.

j. Approximately how many people would the completed project displace?

**None**.

k. Proposed measures to avoid or reduce displacement impacts, if any:

**None.**

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

**The design of this project is consistent with current comprehensive plans and zoning regulation.**

**9. Housing**

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

**Does not apply.**

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

**None.**

c. Proposed measures to reduce or control housing impacts, if any:

**Does not apply.**

**10. Aesthetics**

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed?

**Does not apply.**

b. What views in the immediate vicinity would be altered or obstructed?

1) Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?
☐No ☒Yes, viewing location:

**Portions of the proposed sale area are visible from the Lake Cavanaugh Road.**

2) Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?
☒No ☐Yes, scenic corridor name:

3) How will this proposal affect any views described in 1) or 2) above?

**Portions of Unit 1 will be visible from the Lake Cavanaugh Road. Once this area has been harvested it will contribute to the mosaic of management of the Walker Valley Area. The proposed area will be consistent with other younger stands of the area.**

c. Proposed measures to reduce or control aesthetic impacts, if any:

**Scattered leave tress and consolidated leave tree clumps throughout the unit will help alleviate any potential aesthetic impacts. The proposed area will also be planted one growing season following harvest, further reducing any aesthetic impacts.**

**11. Light and Glare**

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

**Does not apply.**

b. Could light or glare from the finished project be a safety hazard or interfere with views?

**Does not apply.**

c. What existing off-site sources of light or glare may affect your proposal?
**Does not apply.**

d. Proposed measures to reduce or control light and glare impacts, if any:
**Does not apply.**

**12. Recreation**

a. What designated and informal recreational opportunities are in the immediate vicinity?

**With in this proposal several trails that makeup the Walker Valley Trail System exist. These trails are used for hiking, mountain biking and ORV use.**

b. Would the proposed project displace any existing recreational uses? If so, describe:

**This proposal will temporarily displace the above mentioned recreation uses. This proposal will only potentially impact a small percentage of the Walker Valley Trail System, while the remaining system remains open.**

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

**Trails will be posted closed to users during operations. Harvest operations are designed to limit and or repair any damage to existing trail bridges. Following harvest activities the tail users will be allowed to reestablish and continue to use the trail.**

**13. Historic and Cultural Preservation**

a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

**None known.**

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

**None known.**

c. Proposed measures to reduce or control impacts, if any:
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)

**Does not apply.**

**14. Transportation**

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

**Highway 9 and the Lake Cavanaugh Road are all public roads used to access this site.**

1) Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)?

**There is no indication that this proposal will contribute to such a problem. As the proposal is located in a rural area, traffic is minimal. All public roads accessing the area are paved, so use of these roads should not contribute to dust or maintenance problems. Log truck traffic is consistent with the existing transportation patterns.**

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

**No.**

c. How many parking spaces would the completed project have? How many would the project eliminate?

**None.**

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

**No.**

1) How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?

**Apart from log hauling during the course of operations, this proposal will have no impact on the overall transportation system in the surrounding area.**

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

**No.**

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

**.04 trips per day (approximately once a month) for management purposes, for the first 5-10 years after the completion of the proposal.**

g. Proposed measures to reduce or control transportation impacts, if any:

**Safe operation of vehicles will be encouraged.**

**15. Public Services**

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.
**No.**

b. Proposed measures to reduce or control direct impacts on public services, if any.

**Access will be restricted as needed during periods of extreme fire danger**

**16. Utilities**

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

**Does not apply**

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

**Does not apply.**